

Appl. No. 10/791,598  
Amdt. Dated November 6, 2006  
Reply to Office Action of August 9, 2006

Attorney Docket No. 81864.0030  
Customer No.: 26021

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-8. (Canceled)

9. (Original) A Faraday rotator that uses a bismuth-substituted rare earth iron garnet single crystal and rotates the polarization plane of incident light, said single crystal necessarily containing Gd, Tb and Yb as rare earth elements and exhibiting substantially rectangular magnetic hysteresis,

wherein, Faraday rotary moment in a temperature range of -40°C to +85°C with a wavelength of 1550 nm, is 700°/cm or more and the temperature property of the Faraday rotation angle in said temperature range with said wavelength, is 13% or less of a target value thereof,

the wavelength property of the Faraday rotation angle at room temperature with a wavelength of 1500 to 1600 nm, is 8% or less of a target value thereof, and

insertion loss at room temperature with a wavelength of 1550 nm, is 0.1 dB or less.

10. (Original) A Faraday rotator according to claim 9, wherein said single crystal contains in addition to Gd, Tb and Yb, at least one element selected from the group consisting of La, Ce, Pr, Nd, Pm, Sm, Eu, Dy, Lu, Tm, Er, Ho, Y, and Ca.

11. (Original) A Faraday rotator according to claim 10, wherein said Faraday rotary moment in a temperature range of -40°C to +85°C with a wavelength of 1550 nm, is 800°/cm or more.

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12. (Original) A Faraday rotator according to claim 9, wherein said temperature property is 11% or less of a target value thereof.

13. (Original) A Faraday rotator according to claim 9, wherein said wavelength property is 7% or less of a target value thereof.

14. (Original) A Faraday rotator according to claim 9, wherein said insertion loss is 0.07 dB or less.

15-27. (Canceled)

28. (Currently Amended) A Faraday rotator using a bismuth-substituted rare earth iron garnet single crystal, comprising front and back surfaces placed opposite to each other in a predetermined distance and sides formed around said front and back surfaces, wherein fine projections and depressions are formed uniformly on at least one side of said sides, by using a wire saw.

29. (Original) The Faraday rotator according to claim 28, wherein said single crystal exhibits substantially rectangular magnetic hysteresis.

30-31. (Canceled)

32. (New) A Faraday rotator according to claim 9, wherein:  
said bismuth-substituted rare earth iron garnet single crystal comprising front and back surfaces placed opposite to each other in a predetermined distance and sides formed around said front and back surfaces, wherein fine projections and depressions are formed uniformly on at least one side of said sides.